SSE | Tutorial 9

Task 1

Prepare your working environment for this tutorial. You can do these exercises also on paper, but the available modeler will support your work. Choose therefore on either taking a local installation of the Camunda Modeler[1] or using the online tool Cawemo[2], where you must sign up for free first.

If you need more detailed information than the lecture materials, you can find the specification of BPMN 2.0 and an examples non-normative document at https://www.omg.org/spec/BPMN/2.0/.

Task 2

Model the following pizza order scenario as a collaboration diagram in BPMN 2.0. The participants are the Customer and the Pizza Vendor.

Consider that we have customers who love Pizza. As soon as the hunger is noticed the Customer chooses the Pizza and order it via phone call. Such an order is received by the Clerk from the Pizza Vendor. She forwards the order to the Chef accordingly and the Chef bakes the Pizza. Once the Pizza is prepared, he handover it to the Delivery Boy for delivery. Upon the arrival of Pizza, the Customer clears the payment and gets a receipt in return. The only action left is to eat the pizza with love and thus hunger is satisfied.

During the process, after the order, if the Pizza does not arrive within 60 minutes the Customer might ask for the status, several times. Thus, the Clerk needs to calm down the Customer using his magical skills.

Task 3

Consider the created *pizza.bpmn* from Task 2 and extend it towards the following descriptions:

1. Ordering the Pizza should not only be an abstract task but enhanced with more details. Thus, it should be possible to order not only via phone but also online via the webshop of the pizza vendor. In most cases the customers are calling the vendor and order via phone, to end up with the submission of the order. In the online version, they first have to open the website, fill the cart and add order details like their address and their name. Before submitting the order, the customer has to check the correctness.
2. The pizza vendor wants to add also the possibility of an online payment mechanism. Thus, the delivery boy will not have to receive the payment later. This online payment is only possible by ordering via the webshop and is signaled after the order check of the customer if chosen by the customer.

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[1] https://camunda.com/download/modeler/, https://docs.camunda.org/get-started/quick-start/service-task/
[2] https://cawemo.com/

Homework

1. Model as a collaboration diagram in BPMN 2.0 the following visa application scenario. The participants are the visa applicant, the Visa Service Center (VSC) and the immigration office of the target country.

   First, the applicant submits an online visa application form to the VSC and receives a confirmation with an application ID. The applicant then performs the payment for the visa services and fixes an appointment with the VSC. Note: there should be no more than 30 days between the submission of the online visa application and appointment at the VSC, otherwise the online application is discarded by the system.

   On the day of the appointment, the applicant shows up at the VSC. If not previously submitted for another visa application, the applicant submits then her biometric data. Moreover, the applicant submits all the printed forms, documents and her passport for consideration. The applicant has the possibility to pay for a courier service that delivers the documents when the process is completed or opt to pick them up in person.

   Upon reception of the visa applications, the VSC performs some preliminary checks and forwards the application forms to the selected country's immigration office. The immigration office carries out the necessary checks and decides the outcome of the visa application. At regular intervals, the VSC collects the responses from the immigration office of the target country. If the customer opted for picking up the documents in person, the visa application center notifies her via email. Otherwise, the documents are sent over courier to the applicant

2. BIMP[3] is a free and simple simulator for BPMN business processes to conduct multi-instance simulations. Develop for each of your drawn diagram two different scenarios, one simple case of running everything at least once and one more advanced stressing scenario. Simulate those scenarios with BIMP.

   What are your observations?

[3] http://bimp.cs.ut.ee/simulator